

REMARKS

This is a full and timely response to the Final Office Action mailed August 1, 2007. Upon entry of the foregoing amendments, claims 1-11 are pending in the application. Claims 1-11 have been amended. The subject matter of amended claim 1 is supported in at least the fourth paragraph on page 7 of Applicant's originally submitted specification. Claims 2-11 have been amended to remove hyphens and to correct additional informalities. Accordingly, no new matter is added to the present application.

In view of the foregoing amendments and following remarks, reconsideration and allowance of the present application and pending claims are respectfully requested.

I. Claim Rejections Under 35 U.S.C. § 102 – Claims 1 and 10

A. Statement of the Rejection

Claims 1 and 10 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 5,432,874 to Muraguchi (hereafter *Muraguchi*).

B. Discussion of the Rejection

A proper rejection of a claim under 35 U.S.C. § 102 requires that a single prior art reference disclose each element of the claim. *See, e.g., W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303, 313 (Fed. Cir. 1983). Anticipation requires that each and every element of the claimed invention be disclosed in a single prior art reference. *See, e.g., In re Paulsen*, 30 F.3d 1475, 31 USPQ2d 1671 (Fed. Cir. 1994); *In re Spada*, 911 F.2d 705, 15 USPQ2d 1655 (Fed. Cir. 1990). Alternatively, anticipation requires that each and every element of the claimed invention be embodied in a single prior art device or practice. *See, e.g., Minnesota Min. & Mfg. Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 24 USPQ2d 1321 (Fed. Cir. 1992). The test is the same for a process. Anticipation requires identity of the claimed process and a process of the prior art. The claimed process, including each step thereof, must have been described or embodied, either expressly or inherently, in a single reference. *See, e.g., Glaverbel S.A. v. Northlake Mkt'g & Supp., Inc.*, 45 F.3d 1550, 33 USPQ2d 1496 (Fed. Cir.

1995). Those elements must either be inherent or disclosed expressly. *See, e.g., Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 7 USPQ2d 1057 (Fed. Cir. 1988); *Verdegaal Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 2 USPQ2d 1051 (Fed. Cir. 1987). Those elements must also be arranged as in the claim. *See, e.g., Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ2d 1913 (Fed. Cir. 1989); *Carella v. Starlight Archery & Pro Line Co.*, 804 F.2d 135, 231 USPQ 644 (Fed. Cir. 1986). For anticipation, there must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention. *See, e.g., Scripps Clinic & Res. Found. v. Genentech, Inc.*, 927 F.2d 1565, 18 USPQ2d 1001 (Fed. Cir. 1991).

Accordingly, the single prior art reference must properly disclose, teach or suggest each element of the claimed invention. Applicant's independent claim 1, as amended, includes at least one feature that is not disclosed, taught or suggested by *Muraguchi*.

Applicant's claim 1, as amended, is directed to system for converting first and second signals representative of payload and supervisory information, respectively, between an electrical format and a WDM aggregated optical format wherein "at least one of said at least one first converter, said at least one second converter and said at least one optical WDM converter are in a hermetic enclosure." At least this feature is not disclosed by *Muraguchi*.

In FIG. 2, *Muraguchi* shows a communication system that includes link 1 and link 2 coupled to each other via optical fiber 3, optical fiber 4, optical fiber 5, optical fiber 6 and two-core optical fiber 7 for transmission of light signals in opposing directions between the links. (*Muraguchi*, column 3, lines 51-57.)

However, FIGs. 2 and 3 and the related detailed description of *Muraguchi* are completely silent regarding a hermetic enclosure.

In contrast with *Muraguchi*, Applicant's claimed system includes "at least one of said at least one first converter, said at least one second converter and said at least one optical WDM converter are in a hermetic enclosure." Thus, Applicant's claimed system is structurally different from the device shown in *Muraguchi* for at least the reason that *Muraguchi* does not disclose, teach or suggest this feature. Accordingly,

Muraguchi does not anticipate Applicant's independent claim 1. Consequently, claim 1 is allowable and the rejection under 35 U.S.C. § 102(b) should be withdrawn.

Applicant's dependent claim 10 is also allowable for at least the reason claim 10 depends directly from allowable independent claim 1. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988) (Citations omitted).

II. Claim Rejections under 35 U.S.C. §103 – Claims 2-9 and 11

A. Statement of the Rejection

Claims 9 and 11 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over *Muraguchi*.

Claim 2 stands rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over *Muraguchi* in view of U.S. Patent No. 5,710,652 to Bloom *et al.* (hereafter *Bloom*.)

Claims 3-5 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over *Muraguchi* in view of U.S. Patent No. 6,374,021 to Nakanishi (hereafter *Nakanishi*.)

Claims 6 and 7 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over *Muraguchi* and *Nakanishi* in view of U.S. Patent No. 5,589,684 to Ventrudo *et al.* (hereafter *Ventrudo*.)

Claim 8 stands rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over *Muraguchi* and *Nakanishi* and *Ventrudo* in view of U.S. Patent No. 5,329,394 to Calvani *et al.* (hereafter *Calvani*.)

B. Discussion of the Rejection

For a claim to be properly rejected under 35 U.S.C. § 103,

“[t]he PTO has the burden under section 103 to establish a *prima facie* case of obviousness. In order to make a proper *prima facie* case of obviousness; three basic criteria must be met, as set forth in MPEP § 706.02(j). First, there must be some suggestion or motivation; either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art references, when combined, must teach or suggest all the

claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on Applicant's disclosure."

Each of Applicant's dependent claims 2-9 and 11 includes at least one feature that is not disclosed, taught or suggested by the cited references, alone or in any combination.

1. Claims 9 and 11

Applicant's dependent claims 9 and 11 each depend directly from independent claim 1 and include all the features of claim 1. Accordingly, Applicant's dependent claims 9 and 11 are also allowable for at least the reason that claims 9 and 11 depend directly from allowable independent claim 1. *In re Fine, supra*.

2. Claim 2

Applicant's dependent claim 2 depends directly from independent claim 1, which includes "at least one of said at least one first converter, said at least one second converter and said at least one optical WDM converter are in a hermetic enclosure." Without conceding the propriety of the asserted combination, Applicant respectfully submits that the asserted combination does not disclose at least the aforementioned feature of claim 1, for at least the following reason. *Muraguchi* is entirely silent regarding a hermetic enclosure. *Bloom* is cited for its disclosure of "processing electronics being integrated to said single self-contained module (Figure 3 and Figure 4, the laser drive electronics or power supply PS is within the single self-contained module Figure 3, column 2 line 22-25 and column 3 line 25-26)." Office Action, pg. 9, second paragraph.

However, Figure 3 and Figure 4 do not show and the cited portions of *Bloom* are entirely silent regarding "at least one of said at least one first converter, said at least one second converter and said at least one optical WDM converter are in a hermetic enclosure."

Consequently, the proposed combination of *Muraguchi* and *Bloom* fails to render Applicant's dependent claim 2 obvious because the claim includes at least one feature that is not disclosed, taught or suggested by the proposed combination.

Accordingly, favorable reconsideration and withdrawal of the rejection of dependent claim 2 under 35 U.S.C. §103(a) are respectfully requested.

3. Claims 3-5

Applicant's dependent claims 3-5 depend directly or indirectly from independent claim 1, which includes "at least one of said at least one first converter, said at least one second converter and said at least one optical WDM converter are in a hermetic enclosure." Without conceding the propriety of the asserted combination, Applicant respectfully submits that the asserted combination does not disclose at least the aforementioned feature of claim 1, for at least the following reason.

Muraguchi is entirely silent regarding a hermetic enclosure. *Nakanishi* is cited for its disclosure of "a beam splitter (Figure 3 and 61 in Figure 7.)" Office Action, pg. 9, sixth paragraph.

However, Figure 3 and item 61 in Figure 7 of *Nakanishi* do not disclose, teach or suggest "at least one of said at least one first converter, said at least one second converter and said at least one optical WDM converter are in a hermetic enclosure."

Consequently, the proposed combination of *Muraguchi* and *Nakanishi* fails to render Applicant's dependent claims 3-5 obvious because these claims include at least one feature that is not disclosed, taught or suggested by the proposed combination. *In re Fine, supra*. Accordingly, favorable reconsideration and withdrawal of the rejection of dependent claims 3-5 under 35 U.S.C. §103(a) are respectfully requested.

4. Claims 6 and 7

Applicant's dependent claims 6 and 7 depend indirectly from independent claim 1, which includes "at least one of said at least one first converter, said at least one second converter and said at least one optical WDM converter are in a hermetic enclosure." Without conceding the propriety of the asserted combination, Applicant respectfully submits that the asserted combination does not disclose at least the aforementioned feature of claim 1, for at least the following reason.

Muraguchi is entirely silent regarding a hermetic enclosure. *Nakanishi* is cited for its disclosure of "a beam splitter (Figure 3 and 61 in Figure 7.)" Office

Action, pg. 9, sixth paragraph. *Ventrudo* is cited for its disclosure of “a beam splitter has associated radiation focusing elements (lens 15 and 16 in Figure 1) interposed between said beam splitter and said first and second converter.” Office Action, pg. 11, sixth paragraph.

However, Figure 3 and item 61 in Figure 7 of *Nakanishi* do not disclose, teach or suggest “at least one of said at least one first converter, said at least one second converter and said at least one optical WDM converter are in a hermetic enclosure.” Moreover, lens 15 and lens 16 of Figure 1, as disclosed by *Ventrudo*, do not remedy the failure of *Muraguchi* and *Nakanishi* to disclose, teach or suggest this feature.

Consequently, the proposed combination of *Muraguchi*, *Nakanishi* and *Ventrudo* fails to render Applicant’s dependent claims 6 and 7 obvious because the claims include at least one feature that is not disclosed, taught or suggested by the proposed combination. *In re Fine, supra*. Accordingly, favorable reconsideration and withdrawal of the rejection of dependent claims 6 and 7 under 35 U.S.C. §103(a) are respectfully requested.

5. Claim 8

Applicant’s dependent claim 8 depends indirectly from independent claim 1, which includes “at least one of said at least one first converter, said at least one second converter and said at least one optical WDM converter are in a hermetic enclosure.” Claim 8 further includes “an optical isolator interposed between said beam splitter and said further focusing element.” Without conceding the propriety of the asserted combination, Applicant respectfully submits that the asserted combination does not disclose at least the aforementioned features of claim 1, for at least the following reasons.

Calvani is cited for its disclosure of “an optical isolator (9, 209, 210 in Figure 2) prevent the rays reflected by the mirror or the plate et al from re-entering lasers (column 4 line 33-34).” Office Action, pg. 13, first paragraph.

Applicant respectfully disagrees with this interpretation of *Calvani*. Figure 2 of *Calvani* shows three instances of optical isolators. Optical isolator 9 receives the output of semiconductor laser 1. Optical isolator 10 receives the output of laser 2. Optical isolator 18 receives the output of laser 18. Beam splitter 7 is in the optical

path after optical isolator 9 and optical isolator 10. Absent from *Calvani* is any teaching of placing an optical isolator “between said beam splitter and said further focusing element.” Accordingly, dependent claim 8 is allowable for at least the reason that the proposed combination fails to disclose, teach or suggest this feature of dependent claim 8. *In re Fine, supra*. Accordingly, favorable reconsideration and withdrawal of the rejection of dependent claim 8 under 35 U.S.C. §103(a) are respectfully requested.

In addition to the above cited failure of the proposed combination to render claim 8 obvious, the combination fails to establish a *prima facie* case of obviousness for at least the following additional reason.

Muraguchi is entirely silent regarding a hermetic enclosure. *Nakanishi* is cited for its disclosure of “a beam splitter (Figure 3 and 61 in Figure 7.)” Office Action, pg. 9, sixth paragraph. *Ventrudo* is cited for its disclosure of “a beam splitter has associated radiation focusing elements (lens 15 and 16 in Figure 1) interposed between said beam splitter and said first and second converter.” Office Action, pg. 11, sixth paragraph. Figure 3 and item 61 in Figure 7 of *Nakanishi* do not show and the specification of *Nakashini* is entirely silent regarding “at least one of said at least one first converter, said at least one second converter and said at least one optical WDM converter are in a hermetic enclosure.” Furthermore, lens 15 and lens 16 of Figure 1, as disclosed by *Ventrudo*, do not remedy the failure of *Muraguchi* and *Nakanishi* to disclose, teach or suggest this feature. Moreover, optical isolator 9, optical isolator 10 and optical isolator 18, as disclosed by *Calvani*, do not remedy the failure of *Muraguchi*, *Nakanishi*, and *Ventrudo* to disclose, teach or suggest this feature.

Consequently, the proposed combination of *Muraguchi*, *Nakanishi*, *Ventrudo* and *Calvani* fails to render Applicant’s dependent claim 8 obvious for at least the reason that the claim includes “at least one of said at least one first converter, said at least one second converter and said at least one optical WDM converter are in a hermetic enclosure,” which is not disclosed, taught or suggested by the proposed combination. *In re Fine, supra*. Accordingly, favorable reconsideration and withdrawal of the rejection of dependent claim 8 under 35 U.S.C. §103(a) are respectfully requested.

CONCLUSION

For at least the reasons set forth above, Applicant respectfully submits that pending claims 1-11 are allowable over the cited art of record and the present application is in condition for allowance. Accordingly, a Notice of Allowance is respectfully solicited. Should the Examiner have any comments regarding the Applicant's response, Applicant requests that the Examiner telephone Applicant's undersigned attorney.

Respectfully submitted,

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